

### Quick Reference

	Category	Name	Setting	Operator
Watch				
	Battery	Progress	Fill Ratio	(clamp(#BLN#, 0, 100)/100)
		Progress 0-50	Fill Ratio	(clamp(#BLN#, 0, 50)/50)
		Progress 0-50	<mark>Fill Ratio</mark>	\$#BLN#>0?(clamp(#BLN#, 0, 50)/50):0\$
		Progress 51- 100	Fill Ratio	\$#BLN#>50?(clamp(#BLN#, 50, 100)/50-1):0\$
			Transparency	\$#BLN#>0?100:0\$
			Rotation	((clamp((100-#BLN#),50,100)/100)*360)
			Rotation	((clamp((100-#BLN#),0,50)/100)*360)
			Transparency	\$#BLN#<=20?less:more\$
	Health	Step Count Progress	Fill Ratio	(clamp(#ZSC#, 0, 3000)/3000)
		BPM Progress	Fill Ratio	(clamp(#ZHR#, 0, 200)/200) (Normal Rest HR is normal 60BPM
				some can be as low as 40, should not be above 100 rest; Max
				exercise rate 180BPM)
		Miles	Text	((round((#ZSC#*0.0476)))/100)
				OR
				((round((#ZSC#*2.65)/52.8))/100)
		Kilometers	Text	((round((#ZSC#*0.00762)))/10)
				Or //
		KCAL	Text	((round((#ZSC#*2.4)/27.7))/100) (round((#ZSC#/20)))
		(AUTO) Miles/	Text	\$#WM#=F?((round((#ZSC#*0.0476)))/100)
		Kilometers	TEXT	m:((round((#ZSC#*0.00762)))/10) km\$
		(AUTO) Miles/	Text	\$#WM#=F?((round(#ZSC#))/)Miles:((round(#ZSC#))/)KM\$
		Km Label	TEXE	For Labels only
		(AUTO) Miles/	Text	(100*(#UNITSYS#==METRIC)) -and-
		Kilometers		(100*(#UNITSYS#==IMPERIAL)) btw, in miles it will be lower
				number ((round((#ZSC#*0.00762/1.6)))/10)
	Time	Time Progress	Fill Ratio	(clamp(#DWFSS#, 0, 360)/360)
		Second		(clamp(#DWFSS#, 0, 362)/362) <- To only show 1 sec / this bar
				covers the second bar with a -1 deg rotation
		Ticks Per Sec		(round(#DWFSS#*X/6)/X*6)
				where X is the ticks per second.
				So for 9 ticks per second: (round(#DWFSS#*9/6)/9*6), etc
	144 44	T - 5	EILD II	( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( ) ( )
	Weather	Temp Progress	Fill Ratio	(clamp(#WCT#, 0, 72)/120)
		Forecast Max/Min 1d	Text	#WFBH#º/#WFBL#º
		Next Day	Text	\$#DOW#=0?MON:\$\$#DOW#=1?TUE:\$\$#DOW#=2?WED:\$\$#DOW
		Next Day	TEXT	#=3?THU:\$\$#DOW#=4?FRI:\$\$#DOW#=5?SAT:\$\$#DOW#=6?SUN:\$
				γ-9:1110.3-10-3-14.0 γ-1-1111.3-14.0 γ-1-1110.3-14.5 γ-1-1110.3-14.5 γ-1-1110.3-14.5 γ-1-1
	Date	Day of Week	Transparency	\$#DOWB#=1?100:0\$ (1-7)
		Split Date	Text	Split the date in to 2 and display each number where ever you
		55 54.0		want
				to Get the first number I.E 0-3
				(((#Dd#)-(#Dd#%10))/10)
				to get the second 0-9
	•	•	•	



### Quick Reference

			(#Dd#%10)
Oubition	l c	V manihi ma	V nasition.
Orbiting	Sun Hour Hand Min Hand	X-position: Y-position:	X-position: (160+cos((#DWFHS#+90)*((pi)/180))*160)
	Second Hand		Y-position:
	[Time Based on		(160+sin((#DWFHS#+90)*((pi)/180))*160)
	24 Hour		
	Rotation –		To offset the sun/moon lower during its time increase the + Y
	change #DWFHS# for		point
	other]		
	Moon	X-position:	X-position:
	(This is 180deg	Y-position:	(160+cos((#DWFHS#-90)*((pi)/180))*160)
	from the other) [Time Based on		V nacition
	24 Hour		<b>Y-position:</b> (160+sin((#DWFHS#-90)*((pi)/180))*160)
	Rotation]		(1200.5), ((1200), 1200), 1200)
			To offset the sun/moon lower during its time increase the + Y
			point
5		l s	
Rotation		Rotation:	#DWFSS#
Fade/Color	Time Hour	Transparency	Time Hr Night -5
Change		y	\$#Dk#<5?100:0\$
			Time Hr Day +5/-20
			\$#Dk#>=5&&#Dk#<=20?100:0\$</td></tr><tr><td></td><td></td><td></td><td>Time Hr Night +20</td></tr><tr><td></td><td>Time</td><td>Transparency</td><td>\$#Dk#>20?100:0\$ Time Hr Night -5</td></tr><tr><td></td><td>Sunrise/Sunset</td><td>Transparency</td><td>\$#Dk#<#WSUNRISEH24#?100:0\$</td></tr><tr><td></td><td></td><td></td><td>Time Hr Day +5/-20</td></tr><tr><td></td><td></td><td></td><td>\$#Dk#>=#WSUNRISEH24#&&#Dk#<=#WSUNSETH24#?100:0</td></tr><tr><td></td><td></td><td></td><td>Time Hr Night +20</td></tr><tr><td></td><td>Day / Nicht</td><td>Tuenen</td><td>\$#Dk#>#WSUNSETH24#?100:0\$</td></tr><tr><td></td><td>Day / Night</td><td>Transparency</td><td>\$#DISDAYTIME#=1?100:0\$ Or</td></tr><tr><td></td><td></td><td></td><td>\$#DISDAYTIME#==true?100:0\$</td></tr><tr><td></td><td></td><td></td><td>(For elements visible at the night use "0" (false) instead of "1</td></tr><tr><td></td><td></td><td></td><td>(true) in the condition) and you are done!</td></tr><tr><td></td><td></td><td>Transparency</td><td>\$#Ds#>=1&&#Ds#<12?0:100\$</td></tr><tr><td></td><td></td><td></td><td>Or 6#D1#5-08 8 #D1# 4122100:06</td></tr><tr><td></td><td></td><td></td><td>\$#DH#>=0&&#DH#<12?100:0\$ 1-12 opacity is 0 else 100.</td></tr><tr><td></td><td>Day / Night</td><td>X or Y -</td><td>night</td></tr><tr><td></td><td></td><td>position:</td><td>\$#DISDAYTIME#==false?160:999\$</td></tr><tr><td></td><td></td><td></td><td>day</td></tr><tr><td></td><td></td><td></td><td>\$#DISDAYTIME#==true?160:999\$</td></tr><tr><td></td><td>Day of week</td><td>Transparency</td><td>\$#DOW#==<mark>1</mark>?100:0\$</td></tr></tbody></table>



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			0 = Sunday 1 = Monday /etc
	3k/5k/10k	Transparency	3k
			\$#ZSC#<3000?10000:0\$
			5k
			\$#ZSC#>=3000&&#ZSC#<=5000?10000:0\$</th></tr><tr><th></th><th></th><th></th><th>10k</th></tr><tr><th></th><th></th><th></th><th>\$#ZSC#>5000?10000:0\$</th></tr><tr><th></th><th>Show During</th><th><b>Transparency</b></th><th>\$#Da#==AM?100:0\$</th></tr><tr><th></th><th>"AM"</th><th>_</th><th>6//DU// 422444 DM6 - 6//DU// 422400 06 6 - 444 - 1</th></tr><tr><th></th><th>Show During</th><th>Transparency</th><th>\$#DH#<12?AM:PM\$ or \$#DH#<12?100:0\$ <b>for AM and</b></th></tr><tr><th></th><th>"AM"</th><th></th><th>\$#DH#<12?0:100\$ <b>for PM</b></th></tr><tr><th></th><th>Heart Rate</th><th></th><th>HR -45</th></tr><tr><th></th><th></th><th></th><th>\$#ZHR#<45?200:0\$</th></tr><tr><th></th><th></th><th></th><th>HR +45/-100</th></tr><tr><th></th><th></th><th></th><th>\$#ZHR#>=45&&#ZHR#<=100?200:0\$</th></tr><tr><th></th><th></th><th></th><th>HR +100/-160 \$#ZHR#>=101&&#ZHR#<=160?200:0\$</th></tr><tr><th></th><th></th><th></th><th>HR +160</th></tr><tr><th></th><th></th><th></th><th>\$#ZHR#>160?200:0\$</th></tr><tr><th></th><th>Next Day Text</th><th></th><th>Standard Week Day (Sunday (1) to Saturday (7)) (WHITE)</th></tr><tr><th></th><th>Next Day Text</th><th></th><th>#DOWB#</th></tr><tr><th></th><th></th><th></th><th>Week Day + 1 (RED)</th></tr><tr><th></th><th></th><th></th><th>((#DOWB#+1)-(7*(floor(#DOWB#*(10/7)/10))))</th></tr><tr><th></th><th></th><th></th><th>Week Day + 2 (BLUE)</th></tr><tr><th></th><th></th><th></th><th>((#DOWB#+2)-(7*(floor(#DOWB#*(10/6)/10))))</th></tr><tr><th></th><th>Forecast Next</th><th></th><th>Standard Week Day (Sunday (1) to Saturday (7)) (WHITE)</th></tr><tr><th></th><th>Day Text</th><th></th><th>#WFACI#</th></tr><tr><th></th><th></th><th></th><th>Week Day + 1 (RED)</th></tr><tr><th></th><th></th><th></th><th>(/#WFACI#+1)-(7*(floor(#WFACI#*(10/7)/10))))</th></tr><tr><th></th><th></th><th></th><th>Week Day + 2 (BLUE)</th></tr><tr><th></th><th></th><th></th><th>((#WFACI#+2)-(7*(floor(#WFACI#*(10/6)/10))))</th></tr><tr><th></th><th></th><th></th><th></th></tr><tr><th>Back & Forth</th><th></th><th>Y Position:</th><th>(219+sin((#DWFSS#))*10)</th></tr><tr><th>Motion</th><th></th><th></th><th>Or</th></tr><tr><th>[Pendulum]</th><th></th><th></th><th>(162+sin((#DWFSS#))*70)</th></tr><tr><th></th><th></th><th></th><th>Or</th></tr><tr><th></th><th></th><th></th><th>(160+(120*(sin(#DWE#*2*pi))))</th></tr><tr><th></th><th></th><th></th><th>Or</th></tr><tr><th></th><th></th><th></th><th>\$(round(floor(2*#DWE#+.5)/2))=(floor((2*#DWE#+.5)/2))?160+12</th></tr><tr><th></th><th></th><th></th><th>0*(-1+2*((2*#DWE#+.5)-(floor(2*#DWE#+.5 )))):160-120*(-</th></tr><tr><th></th><th></th><th></th><th>1+2*((2*#DWE#+.5)-(floor(2*#DWE#+.5))))\$</th></tr><tr><th>Fade In/Out</th><th></th><th>Transparency</th><th>((sin(#DWE#*5))*50+50)</th></tr><tr><th>Fuue my Out</th><th></th><th>Transparency</th><th>((SIII(#DWE# * 5)) * 50+50)</th></tr><tr><th></th><th></th><th>Transparency</th><th>\$#Ds#>14&&#Ds#<27?100:0\$</th></tr><tr><th></th><th></th><th>Transparency</th><th>Visible for specified time</th></tr><tr><th></th><th>10sec blink</th><th>Transparency</th><th>\$floor(#DNOW#/10000)%2=0?100:0\$</th></tr><tr><th></th><th>1 103CC DIIIIK</th><th>Transparency</th><th>\$11001(1101VIII) 10000/102-0:100103</th></tr><tr><th>Font</th><th>1sec</th><th></th><th>((.2+(#DWE#)%1)*30)</th></tr><tr><th>(Growing)</th><th></th><th></th><th>.2 is a % of full font size of 30</th></tr><tr><th></th><th></th><th></th><th></th></tr><tr><th></th><th></th><th>1</th><th></th></tr></tbody></table>



### Quick Reference

			I	1
Phone				
Pilone	Battery	Battery Progress	Fill Ratio	(clamp(#PBN#, 0, 100)/100)
			Transparency	\$#PBN#>0?100:0\$
	WiFi	Phone WiFi Level	Transparency	\$#PWL#=1?100:0\$ <b>(1-5)</b>
				#WSUNRISE24#
OIL				
Other	Other	https://www.fa		//cip/#7UP#*100\\*E0+E0\
	Expressions	cer.io/watchfa		((sin(#ZHR#*100))*50+50) (50+50*sin(2*pi*#Dsm#*#ZHR#/60))
	for use and	ce/nnnzoD8Ot		(30130 3111(2 pt #D3111# #Z111\#/00/)
	example	5		Tested and working fine! Thanks Mike, just replaced 2*pi for 6.28
				(50+50*sin(6.28*#Dsm#*#ZHR#/60))
				Note: in watches without sensor the tag returns zero and break
				the formula, so is better to use a conditional like
				\$#ZHR#>0?(50+50*sin(6.28*#Dsm# * #ZHR#/60)):(100- 200*((#Dsm#/2)%0.5))\$
				where if the tag is zero remains a steady half of a second pulse.
				Take out the spaces between the tags!!!!
			Rotation	((((((#WRH#+(#WRm#/60))/24)*(360))+225)+#DWFKS#)-
				(#DWFHS#+180))
			Rotation	((((((((#WRH#+12)/2)+(#WRm#/60))/24)*(360))+225)+#DWFKS#)-
				(#DWFHS#+180))
			Rotation	((((((#WRH#+(#WRm#/60))/24)*(360))+225)+#DWFKS#)-
			Rotation	(#DWFHS#+180)) ((((((#WSH#+(#WSm#/60))/24)*(360))+135)+#DWFKS#)-
			Rotation	((((((#W3H#+(#W3H#/60))/24)*(360))+133)+#DWFK3#)-
			Rotation	((((((((#WSH#+12)/2)+(#WSm#/60))/24)*(360))+135)+#DWFKS#)-
				(#DWFHS#+180))
			Rotation	(((((((#WSH#+(#WSm#/60))/24)*(360))+135)+#DWFKS#)-
				(#DWFHS#+180))
			Rotation	((#DWFKS#)-(#DWFHS#+180))
			Rotation	((((((((((((((((((((((((((((((((((((((
				0))- floor(((((((((#Dsm#/60)+#Dm#)/60)+#DH#)/24)+#DD#)*3)/1096)+
				#Dyyyy#)/(850481/10521600)))*180)+11)+90)*(1))+85)
			Transparency	\$(#DH#+(#Dm#/60))>(#WRH#+(#WRm#/60))&&(#DH#+(#Dm#/60
				))<(#WSH#+(#WSm#/60))?0:100\$
		weather and	Transparency	\$#DISDAYTIME#==true&&#WFACI#==01?100:0\$</th></tr><tr><th></th><th></th><th>daytime visible</th><th></th><th></th></tr><tr><th></th><th></th><th></th><th></th><th>(round(#BLN#/10)*10))</th></tr><tr><th></th><th></th><th>Consider 60</th><th></th><th>Sets transparency from 100 to 0, step 10.</th></tr><tr><th></th><th></th><th>Growing 60sec</th><th></th><th>\$floor(#DNOW#/500)%2=0?40:10\$</th></tr></tbody></table>



### Quick Reference

40=Max Font Size 10=Min Font Size



### Quick Reference

### (Other Tuts)

Small obj orbiting edge of watch / second hand

X-position:

(160 + cos((#DWFS# - 90) \* ((pi)/180)) \* 140)

Y-position:

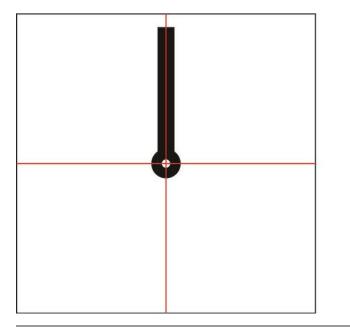
(160 + sin((#DWFS# - 90) \* ((pi)/180)) \* 140)

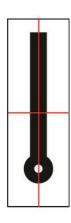
The 140 is what controls the spacing from the center

The DWFS tag is for seconds that "jump". if you want it to move smoothly use DWFSS.

If you want to do one for hours use DWFK (I think). etc.

It is the way I use. when I make my own hand image I will crop the size of the image like the left one, so the hand will rotate at the center hole of the hand.





### Quick Reference



### **Basic Recipes**

If you want to get started in more advanced techniques, we've put together a small collection of recipes for commonly used techniques.

Be sure to check out the **Community** for more techniques!

Width-Based Battery Indicator Bar

There are many ways to create a custom battery indicator, but one of the easiest is to use a shape & the width property to show the battery level for a watch or phone.

You can inspect this watch face to see it in action and look under the hood!

### Recipe for Width-Based Battery Indication

**Property: Width** ((#BLN#)\*1.55)

Rotate Any Element Over Time

While we provide essential elements for analog time, you might have an idea that makes a second/minute/hour hand out of a different element altogether (rotating text, shape, cat with laser eyes, etc). This recipe will show you how to rotate any element based on the time. For our example we use 'seconds': #DWFSS#, but you could also use a different tag.

You can inspect this watch face to see it in action on a shape element!

### **Recipe for Rotating With Seconds**

**Property: Rotation** 

#DWFSS#

**Back & Forth Motion** 

You can use the sine & cosine functions to make back & forth movement, as demonstrated by this laser cat's tongue: You can inspect this watch face to see it in action and look under the hood!

### Recipe for Back & Forth Motion

**Property: Y Position** 

(219 + sin((#DWFSS#))\*10)

Or

(162+sin((#DWFSS#))\*70)

#### **Advanced Animations**

In order to help advanced users with a series of samples of possibilities, we've created the 'Expression Playground' watch face. This watch face isn't very useful for telling time, but you can use Inspection Mode to see how we achieve certain animations and effects with Facer.

How does this watch face work?

We'll go through a couple of specific expressions used in the watch face in the recipes below. You can open the watch in inspector mode to see how it all works:

https://www.facer.io/watchface/1WkGlWDQzf/inspect

Feel free to make changes, nothing will get saved so you're free to play!

### Quick Reference



#### Fade In / Fade Out

These recipes cover 3 behaviors: Fade in when the watch wakes up, Fade out when the watch wakes up, or Fade In/Out on a loop.

#### Recipe for Fade In When the Watch Wakes:

**Property: Transparency** 

((interpAccel(#DWE#, 0, 2, 2)\*100))

#### Recipe for Fade Out When the Watch Wakes:

Property: Transparency

(100-(interpAccel(#DWE#, 0, 2, 2)\*100))

#### Recipe for Looping Fade In & Fade Out:

Property: Transparency ((sin(#DWE#\*5))\*50+50)

Pendulum Motion

Allow an element to move as if swinging from a string:

#### **Recipe for Pendulum Motion:**

Property: Rotation (sin(#DWE#\*2)\*50)

"Breathing" Motion

Have an element cycle properties easing in & out, to create a 'breathing' effect

#### **Recipe for Breathing Opacity:**

Property: Transparency ((sin(#DWE#\*2)\*60)+50)

#### **Recipe for Breathing Size:**

Property: Radius ((sin(#DWE#\*2)\*40)+50)

Basic Orbit

Orbit an element in a circular motion

#### **Recipe for Basic Orbit:**

Property: X Position (160 + sin(#DWFSS#/4)\*50) Property: Y Position (160 + cos(#DWFSS#/4)\*50)

### **Animated Battery Power Level Indicators**

Here are the three basic possibilities we will speak about in this tutorial.

This tutorial should show you, in a simple way & at one place, how to elevate your watch faces with some basic expressions\*.

### **Super Simple Percentage Number**

This is maybe something you are already using at your watch faces. Tag

#BLP#

shows your watch battery level as a text.

# Tacer a watering



#### **Color Changing**

Changing of the colors according to the power percentage could be done with a duplication of element. I use usually 3 elements in three colors. Visibility of different colored elements could be changed at the transparency. Here an example for

#### Green

\$#BLN#>40?100:0\$

#### Yellow

\$#BLN#>=20&&#BLN#<=40?100:0\$

#### Red

\$#BLN#<20?100:0\$

In those expressions a tag #BLN# is using instead of #BLP# because we need a "pure" number to be able to compare it with another value. This color change could be apply for any battery level indicator in this tutorial (number, hand, or object)

### **Linear Battery Indicator**

For this effect I use the standard "Rectangle" you could find in Facer.io Creator as Shape or I create an image especially for this purpose. In the case of an own picture, please be sure that your "indicator" **covers the full area of picture**, like this:

Red line shows only the end of the image. The second important thing is to set **correct align** according to the "growing" object in the right way:

So, the last thing we need is to make the "Height" of the object dynamic & appropriate to the battery level. If the "full battery level" means for example the number "48", the final expression would be:

#### Height:

(#BLN#\*0.48)

And it's done.

For changing the colors please use the same process as at the "Super Simple Percentage Number" part.

#### **Hand Indicator**

For those purposes I recommend to use of your own hands saved as PNG image (or another one with transparent background). Very important is the position of the hand according to the image. In the standard settings the pictures and objects rotate around the image centre. So, if you wish to have a nice and smooth movements, please check that the image centre is also the centre of your hand, like this:

Red line again shows only the end of the image. White background should be 100% transparent. After you find the correct position of your hand according to the dial, e.g.:



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The last thing is to set a dynamic rotation. If you are not sure what angle is your starting and the end position, please just rotate your hand into the limit positions like:

Now we have the range we are moving in. In this case 300 degree (of 360 degree for a full circle), starting (Tag #BLN# = 0) at -150 degree. The battery level is divided into 100 parts. It means that 1% change of battery level are 3 degrees change at the rotation. So the final expression will be:

#### **Rotation:**

(-150+(#BLN#\*3))

#### Done!

I hope, it could helps you and I would be happy, if you leave me a comment how well does it work at your watch face.

Here is an "inspection mode open" watch face, where you could see how does it work for linear battery and hand dials temperature:

\*There are also another great tutorials and/ or explanations in the facer.io community done by e.g. @Bertso and @jimmycheung like <u>battery indicator</u> or <u>hand</u> <u>rotation</u>. If you know about further tutorials, I will be happy to link it too.





## **TAGS**

Tags are dynamic values you can add to the dynamic attributes of a watch face layer. Facer tags are always surrounded by hashtags: #Ds#. Dynamic means the value can be different under different circumstances. For example, the #Ds# is the current second value, so every second this value changes.

	TAGS	DEFINITION	EXAMPLE DUTPUT
Date & Time			
	#DWE#	Time elapsed since last	5.12
		watch face view (in seconds	
		with 0.01 parts)	
	#DNOW#	Current timestamp	1550780363
	#DSYNC#	Timestamp at which watch	1550780132
		face was synced	
	#Dy#	Year	2016
	#Dyy#	Short Year	16
	#Dyyyy#	Long Year	2016
	#DM#	Month in Year (Numeric)	11
	#DMM#	Month in Year (Numeric)	11
	#D0 40 40 4H	with leading 0	New
	#DMMM#	Month in Year (Short String)	Nov
	#DMMMM#	Month in Year (String)	November
	#DW#	Week in Month	2
	#Dw#	Week in Year	45
	#DD#	Day in Year	313
	#Dd#	Day in Month	8
	#DdL#	Day in Month with leading 0	08
	#DIM#	Maximum days in the	30
		current month	
	#DE#	Day of Week (Short String)	Tue
	#DES#	First letter of the day of Week	Т
	#DOW#	Day of week int (0-6 where 0 is Sunday)	2
	#DOWB#	Day of week int (1-7 where 1	3
	#DOVVB#	is Sunday)	3
	#DEEEE#	Day of Week	Tuesday
	#DF#	Day of Week in Month	2
	#Da#	AM/PM	PM
	#Db#	Hour in day using user's	FIVI
	#00#	preferred format (12 hour or	
		24 hour clock). NOTICE: This	
		is the recommended tag for any digital times.	
	12		
	#Dh#	Hour in Day (1-12). NOTICE:	12
		This should only be used in	
		specific cases where #Db#	
		does not work.	
			·



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#Dk#	Hour in Day (1-24). NOTICE:	12	
#01/#	This should only be used in	14	
	specific cases where #Db#		
	does not work.		
#D11#		12	
#DH#	Hour in Day (0-23)	12	
#DK#	Hour in Day (0-11)	0	
#DHZ#	Hour in Day (leading zero) (00-23)	08	
#DkZA#	First Digit of the Hour in Day (0-2)	1	
#DkZB#	Second Digit of the Hour in Day (0-9)	2	
#DKZ#	Hour in Day (12 hour, leading zero) (00-11)	00	
#DhZ#	Hour in Day (12 hour,	09	
	leading zero) (01-12)		
#DhZA#	First Digit (12 hour) of the in Day (0-1)	1	
#DhZB#	Second Digit (12 hour) of the in Day (0-9)	2	
#DhoT#	Value for Hour Rotation (12	360	
	hour) (30-360 with intervals of 30)		
#DhoTb#	Value for Hour Rotation (24	180	
	hour) (0-345 with intervals of 15)		
#DWFK#	Value for Hour Rotation (12	360	
	hour) (30-360 with intervals		
#B14/E11#	of 30)	100	
#DWFH#	Value for Hour Rotation (24 hour) (0-345 with intervals of 15)	180	
#DWFKS#	Smooth Value for Hour	200	
	Rotation (12 hour) (30-390)	389	
#DWFHS#	Smooth Value for Hour	194.5	
	Rotation (24 hour) (0-359.75 with 0.25 parts)		
#DhT#	String value for hour (12 hour)	twelve	
#DkT#	String value for hour (24 hour)	twelve	
#Dm#	Minute in Hour	58	
#DmZ#	Minute in Hour (leading zero)	08	
#DWFM#	Value for minute hand rotation (0-354 with intervals of 6)	348	
#DWFMS#	Smooth Value for minute	351.8	
	hand rotation (0-359.9 with	331.0	
#DmT#	0.1 parts)	fifty sight	
#DmT#	String value for minutes	fifty eight	



### Quick Reference

#DmMT#	String value for minutes (tens place)	fifty
#DmST#	String value for minutes (ones place)	eight
#Ds#	Second in minute	38
#DsZ#	Second in minute (leading	09
	zero)	
#Dsm#	Second in minute plus	38.805
	milliseconds	
#DseT#	Value for second hand	228
	rotation (0-354 with	
	intervals of 6)	
#DWFS#	Rotation value for second hand (0-354 with intervals of 6)	228
#DWFSS#	Smooth Rotation value for	232.829999946838
#D VV1 35#	second hand (0-	232.023333340030
	359.99399991780274)	
#DSMOOTH#	Smooth Rotation (boolean)	true
#Dz#	Timezone Abbreviation	PST
#Dzzzz#	Timezone Name (Long - if	PST
	available)	
#DWR#	Day of Week Rotational	154.28571428571428
	Code	
	(51.42857142857142(for	
	sunday)-360(for saturday)	
	with intervals of	
	51.42857142857142)	
#DMR#	Day of Month Rotational	92.90322580645162
	Code	
	(11.612903225806452(for	
	1st)-360(for 31th) with intervals of	
	11.612903225806452)	
#DYR#	Day of Year Rotational Code	313
"5" THE	(1-365(non-leap year),or 1-	
	366(leap year))	
#DMYR#	Month in Year Rotational	330
	Code (30-360 with intervals	
	of 30)	
#DUh#	Hour in Day (UTC) (1-12)	8
#DUk#	Hour in Day (UTC) (1-24)	20
#DUH#	Hour in Day (UTC) (0-23)	20
#DUK#	Hour in Day (UTC) (0-11)	8
#DUb#	Hours in day using user's	
	preferred format (UTC) (12/24)	
undefined		
#DUHZ#	Hour in Day (leading zero) (UTC) (00-23)	05



### Quick Reference

	#DL1k7#	Hour in Day (loading zoro)	02
	#DUkZ#	Hour in Day (leading zero) (UTC) (01-24)	02
	#DUKZ#	Hour in Day (12 hour,	08
	"BOKE"	leading zero) (UTC) (00-11)	
	#DUhZ#	Hour in Day (12 hour,	08
		leading zero) (UTC) (01-12)	
	#DUm#	Minute in Hour (UTC)	58
	#DUmZ#	Minute in Hour (leading	09
		zero) (UTC)	
	#DUs#	Second in minute (UTC)	38
	#DUsZ#	Second in minute (leading	08
		zero) (UTC)	
Device information	T		
	#BLP#	Watch Battery Level Percentage	46%
	#BLN#	Watch Battery Level Integer	46
	#BTC#	Watch Battery Temperature	31°C
		(°C)	
	#BTI#	Watch Battery Temperature (°F)	87°F
	#BTCN#	Watch Battery Temperature	31
	URTINU	(Celcius)	07
	#BTIN#	Watch Battery Temperature (Fahrenheit)	87
	#BS#	Watch Battery Charging	0
		Status	
	#ZLP#	Low Power Mode	null
	#ZDEVICE#	Device Name	Smartwatch
	#ZMANU#	Device Manufacturer	Facer
	#ZISROUND#	Device Screen Shape (true, if circular)	false
	#PBP#	Phone Level Percentage	79%
	#PBN#	Phone Level Integer	79
	#PWL#	Phone WiFi Level	3
	#ZWC#	Number of watch face	26
		activations since synced	
Weather information			
	#WM#	Weather Units (F/M)	F
	#WLC#	Weather Location	Los Angeles
	#WTH#	Today's High	86
	#WTL#	Todays' Low	63
	#WCT#	Current Temp	84
	#WCCI#	Current Condition Icon	03
	#WCCT#	Current Condition Text	Fair
	#WCHN#	Current Humidity Number	40
	#WCHP#	Current Humidity Percentage	40%
	#DISDAYTIME#	Returns true if time is after	true
		sunrise and before sunset	
	#WRh#	Sunrise hour (1-12)	5



### Quick Reference

_	WAIDL 7.11	Consider heavy (leasting age)	l or
	#WRhZ#	Sunrise hour (leading zero) (01-12)	05
	#WRH#	Sunrise hour (0-23)	5
	#WRHZ#	Sunrise hour (leading zero) (00-23)	05
	#WRm#	Sunrise minute (0-59)	50
	#WRmZ#	Sunrise minute (leading zero) (00-59)	06
	#WSh#	Sunset hour (1-12)	8
	#WShZ#	Sunset hour (leading zero) (01-12)	08
	#WSH#	Sunset hour (0-23)	20
	#WSHZ#	Sunset hour (leading zero) (00-23)	01
	#WSm#	Sunset minute (0-59)	6
	#WSmZ#	Sunset minute (leading zero) (00-59)	06
	#WSUNRISE#	Time of sunrise	5:50 am
	#WSUNSET#	Time of sunset	8:06 pm
	#WSUNRISE24#	Time of sunrise (24)	5:50
	#WSUNSET24#	Time of sunset (24)	20:06
	#WSUNRISEH#	Hour of sunrise	5
	#WSUNRISEM#	Minute of sunrise	50
	#WSUNSETH#	Hour of sunset	8
	#WSUNSETM#	Minute of sunset	06
	#WSUNRISEH24#	Hour of sunrise (24)	5
	#WSUNSETH24#	Hour of sunset (24)	20
	#WFAH#	Forecast Day 1 High	86
	#WFAL#	Forecast Day 1 Low	63
	#WFACT#	Forecast Day 1 Condition Text	Clear
	#WFACI#	Forecast Day 1 Condition Icon	01
	#WFBH#	Forecast Day 2 High	85
	#WFBL#	Forecast Day 2 Low	63
	#WFBCT#	Forecast Day 2 Condition Text	Sunny
	#WFBCI#	Forecast Day 2 Condition Icon	01
	#WFCH#	Forecast Day 3 High	85
	#WFCL#	Forecast Day 3 Low	63
	#WFCCT#	Forecast Day 3 Condition Text	Sunny
	#WFCCI#	Forecast Day 3 Condition	01
	#WFDH#	Forecast Day 4 High	88
	#WFDL#	Forecast Day 4 Low	64
	#WFDCT#	Forecast Day 4 Condition Text	Sunny
	<b>.</b>	<u> </u>	<u> </u>



### Quick Reference

	#WFDCI#	Forecast Day 4 Condition	01	
		Icon		
	#WFEH#	Forecast Day 5 High	86	
	#WFEL#	Forecast Day 5 Low	68	
	#WFECT#	Forecast Day 5 Condition	Mostly Sunny	
		Text	, ,	
	#WFECI#	Forecast Day 5 Condition	01	
		Icon		
Health/Fitness inform	ation			
	#ZSC#	Step Count	1556	
	#ZHR#	Average Heart Rate (bpm)	76	
Interactions				
	#SWISRUNNING#	Stopwatch Active State (boolean)	0	
	#SWEMS#	Stopwatch elapsed milliseconds	6034	
	#SWES#	Stopwatch elapsed seconds	6	
	#SWEM#	Stopwatch elapsed minutes	4	
	#SWEH#	Stopwatch elapsed hours	0.3	
Programmables Programmable tags call to VAR_6	n be updated using the pr	ogrammable widgets of the Fac	er Creator. There are currer	ntly 6 variables, VAR_1
_	#VAR_1#	Value for interactive variable 1	12	
	#VAR_1_T#	Timestamp at which interactive variable 1 was last updated	1550780123	

# **EXPRESSIONS**

Math expressions can take your watch face to next level. Facer supports arithmetical operations as well as a handful of math functions. You can also drop facer tags into expressions to make them even more dynamic!

NOTE: Math expression require parentheses. So, this will work (1+1) and this will not 1+1!

	OPERATOR	DEFINITION	EX EXPRESSION	EX OUTPUT	
Operators					
	+	Addition operator	(3+2)	5	
	-	Subtraction	(3-2)	1	
		operator			
	*	Multiplication	(3*2)	6	
		operator			
	/	Division operator	(3/2)	1.5	
	%	Modulo operator	(5%2)	1	
Constants					
	pi	Value of pi	(pi)	3.141592653589793	





# **EXPRESSIONS**

Math expressions can take your watch face to next level. Facer supports arithmetical operations as well as a handful of math functions. You can also drop facer tags into expressions to make them even more dynamic!

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	OPERATOR	DEFINITION	<b>EX EXPRESSION</b>	EX OUTPUT
	е	Value of e	(e)	2.718281828459045
Functions				
	rand(min, max)	Random number generator	(rand(1, 10))	1
	wakeRand(min, max)	Random number generator that's updated every time the watch face goes into active mode	(wakeRand(1, 10))	1
	abs(number)	Absolute value function	(abs(-10))	10
	sin(number)	Sine function	(sin(1))	0.8414709848078965
	cos(number)	Cosine function	(cos(1))	0.5403023058681398
	tan(number)	Tangent function	(tan(1))	1.5574077246549023
	round(number)	Round function (get the closest integer)	(round(1.6))	2
	ceil(number)	Ceiling function (gets the next highest integer)	(ceil(1.2))	2
	floor(number)	Floor function - gets the next lowest integer)	(floor(1.6))	1
	log(number)	Log function	(log(2))	0.6931471805599453
	log2(number)	Log base 2 function	(log2(2))	1
	log10(number)	Log base 10 function	(log10(2))	0.3010299956639812
	sqrt(number)	Square root function	(sqrt(4))	2
	cbrt(number)	Cube root function	(cbrt(8))	2
	exp(number)	Gets E to the x power	(exp(2))	7.38905609893065
	expm1(number)	Gets E to the x power minus 1	(expm1(2))	6.38905609893065
	deg(radians)	Convert radians to degrees	(deg(1))	57.29577951308232
	rad(degrees)	Converts degrees to radians	(rad(180))	3.141592653589793





# **EXPRESSIONS**

Math expressions can take your watch face to next level. Facer supports arithmetical operations as well as a handful of math functions. You can also drop facer tags into expressions to make them even more dynamic!

NOTE: Math expression require parentheses. So, this will work (1+1) and this will not 1+1!

OPERATOR	DEFINITION	EX EXPRESSION	EX OUTPUT
clamp(current, min, max)	Restrict 'current' value to the 'min' & 'max'	(clamp(#Ds#, 15, 45))	31
squareWave(current, amplitude, period, xOffset)	Creates a square wave pattern out of 'current' value	(squareWave(#Ds#, 15, 10, 0))	15
interpAccel(current, min, max, accelerationFactor)	Creates a ease-in transition with 'current' value	(interpAccel(#Ds#, 0, 60, 2))	0.2669444444444445
interpDecel(current, min, max, accelerationFactor)	Creates a ease- out transition with 'current' value	(interpDecel(#Ds#, 0, 60, 2))	0.9454258487654321
interpAccelDecel(current, min, max)	Creates a ease-in- out transition with 'current' value	(interpAccelDecel(#Ds#, 0, 60))	0.5261679781214715
gyroX()	Outputs the X axis of the gyro sensor, accumulated into positional coordinates	3.9241372946780517	3.9241372946780517
gyroY()	Outputs the Y axis of the gyro sensor, accumulated into positional coordinates	-1.0019503694835041	- 1.0019503694835041
accelerometerX()	Outputs the X axis of the accelerometer sensor, accumulated into positional coordinates	-5.273500685642811	-5.273500685642811
accelerometerY()	Outputs the Y axis of the accelerometer sensor, accumulated into positional coordinates	7.629725700177308	7.629725700177308





## **EXPRESSIONS**

Math expressions can take your watch face to next level. Facer supports arithmetical operations as well as a handful of math functions. You can also drop facer tags into expressions to make them even more dynamic!

NOTE: Math expression require parentheses. So, this will work (1+1) and this will not 1+1!

OPERATOR	DEFINITION	EX EXPRESSION	EX OUTPUT	
gyroRawX()	Outputs the raw X axis of the gyro sensor, which detects rotational acceleration	6.64500963775291	6.64500963775291	
gyroRawY()	Outputs the raw Y axis of the gyro sensor, which detects rotational acceleration	-3.9204606214134596	- 3.9204606214134596	
accelerometerRawX()	Outputs the raw X axis of the accelerometer sensor	1.4595613230651239	1.4595613230651239	
accelerometerRawY()	Outputs the raw Y axis of the accelerometer sensor	9.87964297713896	9.87964297713896	

# CONDITIONALS

Conditionals are the most complicated and dynamic way to create a watch face. They take this form:

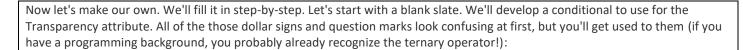
\$ EQUALITY TEST ? EXPRESSION IF TEST IS TRUE : EXPRESSION IF TEST IS FALSE \$

The first space is for our equality test, which is going to equal true or false. There are five types of operators available:

OPERATOR	DEFINITION	<b>EX EXPRESSION</b>	<b>EX OUTPUT</b>	
= or ==	Is equal to	(1=1) or (1==1)	true	
!=	Is not equal to	(1!=0)	true	
>	Is greater than	(2>1)	true	
<	Is less than	(0<1)	true	
>=	Is greater than or equal to	(2>=1)	true	
<=	Is less than or equal to	(0<=1)	true	



### Quick Reference



\$\_\_\_\_\_?\_:\_\$

Now let's fill in that spot with a simple example. We're going to make an expression that will make a layer appear only before noon. This expression would be added to the opacity attribute of the layer. We'll use the #Da# and check if it's "AM":

\$#Da#==AM?\_:\_\$

Next, we'll fill in the EXPRESSION IF TRUE part of the conditional. When #Da# == "AM" is true, we want our layer to appear, so we'll want the opacity to be 100:

\$#Da#==AM?100: \$

Lastly, we'll fill in the EXPRESSION IF FALSE part of the conditional. When #Da# == "AM" is false, we want our layer to disppear, so we'll want the opacity to be 0:

\$#Da#==AM?100:0\$

That's it! You just created your first conditional.

Now some advice:

Don't use " marks before and after texts used in conditions.

Don't use spaces (" ") before and after part of conditions (wrong: \$ #Da# == AM ? 100 : 0 \$ right: \$#Da#==AM?100:0\$)

## **Boolean logic**

For the ultra adventurous, the EQUALITY TEST portion of a Facer conditional also **supports a maximum of 3 basic Boolean operators in any given formula**. (Basic boolean operators are | | | and &&). Have fun!

A note about boolean operators in conditionals, it's important to avoid putting parentheses around equality and boolean expressions. Here are some examples:

These will be ok:

\$ 1 == 1 || 1 == 1 ? 1 : 0 \$ \$ (1+1) == (1) || (1) == (1) ? 1 : 0 \$



### Quick Reference

These will have unexpected results:

\$ (1	==	1)		(1	==	1)	?	1	:	0	\$
\$ (1	==	1	1	==	1)	?	1	:	0	\$	



### Quick Reference

WatchMaker Watch Face Designer

# WatchMaker Tags

Tags are placeholders that can be used in expressions to make your watch face dynamic. They can be used in Lua scripts or simply be printed.

All properties that accept tags will open a tag picker dialog when clicking the little triangle next to the property value. The selected tag will be inserted at the cursor position

	Tag	Description	Example
Date			
	{dd}	Day in month	9
	{ddz}	Day in month (with leading 0)	09
	{ddy}	Day in year	282
	{ddw2}	Day of week	Th
	{ddw}	Day of week	Thu
	{ddww}	Day of week	Thursday
	{ddw0}	Day of week (Sun = 0, Sat = 6)	5
	{ddim}	Days in current month	31
	{dn}	Month in year	1
	{dnn}	Month in year (with leading 0)	01
	{dnnn}	Month in year	Jan
	{dnnnn}	Month in year	January
	{dy}	Year (2 digits)	14
	{dyy}	Year (4 digits)	2014
	{dwm}	Week in month	4
	{dw}	Week in year	40
Time			
	{dh}	Hour in day (1-12)	9
	{dh11}	Hour in day (0-11)	21
	{dh24}	Hour in day (1-24)	9
	{dh23}	Hour in day (0-23)	21
	{dhutc12}	Hour in day UTC (12 hr)	8
	{dhutc12z}	Hour in day UTC (12 hr with leading zero)	08
	{dhutc24}	Hour in day UTC (24 hr)	20
	{dhutc24z}	Hour in day UTC (24 hr with leading zero)	20
	{dutcoff}	UTC Offset	+0100
	{dht}	Hour in day text (1-12)	nine
	{dh24t}	Hour in day text (1-12)	twenty one
	[GIIZ-TCJ	1 110di iii day text (1 24)	twenty one





# WatchMaker Tags

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Tag	Description	Example
{dhz}	Hour in day (1-12) (with	09
	leading zero)	
{dh11z}	Hour in day (0-11) (with	21
	leading zero)	
{dh24z}	Hour in day (1-24) (with	09
	leading zero)	
{dh23z}	Hour in day (0-23) (with	21
	leading zero)	
{dm}	Minute in hour	7
{dmz}	Minute in hour (with leading	07
	zero)	
{dhtt}	Hour in day (1-12 tens)	0
{dhto}	Hour in day (1-12 ones)	9
{dh11tt}	Hour in day (0-11 tens)	0
{dh11to}	Hour in day (0-11 ones)	9
{dh24tt}	Hour in day (1-24 tens)	0
{dh24to}	Hour in day (1-24 ones)	9
{dh23tt}	Hour in day (0-23 tens)	0
{dh23to}	Hour in day (0-23 ones)	9
{dmz}	Minute in hour (with leading	07
	zero)	
{dmt}	Minute in hour (tens)	3
{dmo}	Minute in hour (ones)	1
{dmat}	Minute in hour text (all)	thirty one
{dmtt}	Minute in hour text (tens)	thirty
{dmot}	Minute in hour text (ones)	one
{ds}	Second in minute	2
{dsz}	Second in minute (with	02
	leading zero)	
{da}	AM/PM	AM
{dss}	Milliseconds	32
{dssz}	Milliseconds (with leading	032
	zeros)	
{dsps}	ps} Seconds * 1000 + 1207	
	milliseconds	
{depoch}	Seconds since epoch	1495105593
{dz}	Timezone	BST





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	Tag	Description	Example	
	{dtp}	Time (% 24 hours)	0.74	
	{drh}	Rotation value for hour (12h,	290	
		adj for mins)		
	{drh24}	Rotation value for hour hand	145	
		(24h, adj for mins)		
	{drh0}	Rotation value for hour hand	270	
		(12h)		
	{drm}	Rotation value for min hand	242	
		(adj for secs)		
	{drs}	Rotation value for second hand	156	
	{drss}	Rotation smooth value for	156.2	
		second hand		
	{drms}	Rotation value for	193.4	
0 1 0 11 1		milliseconds		
Color Switcher	(veelen)	Command Calan	#0000	
Countar	{ucolor}	Current Color	ff0000	
Counter	(a alancad)	Cocondo alancad since	50	
	{c_elapsed}	Seconds elapsed since loaded	50	
	{c_0_100_2_st}	0 to 100 in 2s, then stop	50	
	{c_0_100_2_st} {c_0_100_2_rp}	0 to 100 in 2s, then repeat	50	
	{c_0_100_2_rp}	0 to 100 in 2s, then reverse	50	
	{c_0_100_2_rv_2}	As above with 2s start delay	50	
Time Zone	[[C_0_100_2_1V_2]	As above with 23 start actay	30	
Time Zone	{tz1l}	Extra Time Zone 1 Location	Los Angeles	
	{tz1o}	Extra Time Zone 1 Offset	- 8:00	
	{tz1t}	Extra Time Zone 1 Time	01:26	
	{tz1rh}	Extra Time Zone 1 Rotation	42	
	()	hour hand		
	{tz1rh24}	Extra Time Zone 1 Rotation	24	
	· · ·	hour hand (24h)		
	{tz1rm}	Extra Time Zone 1 Rotation	160	
		minute hand		
	{tz2I}	Extra Time Zone 2 Location	London	
	{tz2o}	Extra Time Zone 2 Offset	+ 0:00	
	{tz2t}	Extra Time Zone 2 Time	09:26	
			<u> </u>	





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All properties that accept tags will open a tag picker dialog when clicking the little triangle next to the property value. The selected tag will be inserted at the cursor position

selected tag will be ins	Tag	Description	Example
	{tz2rh}	Extra Time Zone 2 Rotation	283
		hour hand	
	{tz2rh24}	Extra Time Zone 2 Rotation	141
		hour hand (24h)	!
	{tz2rm}	Extra Time Zone 2 Rotation	160
		minute hand	
	{tz3I}	Extra Time Zone 3 Location	Tokyo
	{tz3o}	Extra Time Zone 3 Offset	+ 9:00
	{tz3t}	Extra Time Zone 3 Time	18:26
	{tz3rh}	Extra Time Zone 3 Rotation	190
		hour hand	
	{tz3rh24}	Extra Time Zone 3 Rotation	95
		hour hand (24h)	
	{tz3rm}	Extra Time Zone 3 Rotation	160
		minute hand	
_	up to 3 time zon	ne locations can be specified in	settings
Battery	Laux	1	
	{bl}	Battery level	71
	{blp}	Battery level %	71%
	{br}	Rotation value for Battery	250
		level	
	{btc}	Battery temperature (C)	27
	{btf}	Battery temperature (F)	81
	{btcd}	Battery temperature (C)	27°C
		(percent)	
	{btfd}	Battery temperature (F)	81°F
		(percent)	
Dhana	{bc}	Battery charging status	Charging
Phone	(-h1)	Dette in Diego Lovel	74
	{pbl}	Battery Phone level	71
	{pblp}	Battery Phone level %	71%
	{pbr}	Rotation value for Battery Phone level	250
	{pbtc}	Battery Phone temperature (C)	27
	{pbtf}	Battery Phone temperature (F)	81





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All properties that accept tags will open a tag picker dialog when clicking the little triangle next to the property value. The selected tag will be inserted at the cursor position

	Tag	Description	Example
	{pbtcd}	Battery Phone temperature (C) (percent)	27°C
	{pbtfd}	Battery Phone temperature (F) (percent)	81°F
	{pbc}	Battery Phone charging status	Charging
	{pws}	Phone Wifi Strength %	0.7
	{pwc}	Phone Wifi Connected Y/N	Υ
Device			
	{aname}	Device name	GT1505
	{aman}	Device manufacturer	samsung
	{awname}	Watch name	Motorola 360
	{around}	Is round?	true
	{atyre}	Has flat tyre?	true
	{abright}	Is bright?	true
	{adimlo}	Dim mode supports lo-bit only?	false
	{abss}	Milliseconds since bright (-1 for dim)	150
	{alat}	Current latitude	40.7127
	{alon}	Current longitude	74.0059
	{alatd}	Current latitude (degrees)	40.7127°
	{alond}	Current longitude (degrees)	74.0059°
	{alatdd}	Current latitude (degrees + direction)	40.7127°N
	{alondd}	Current longitude (degrees + direction)	74.0059°E
	{aalt}	Current altitude	104.800
Stopwatch			
	{swh}	Stopwatch hours	0
	{swm}	Stopwatch minutes	1
	{sws}	Stopwatch seconds	25
	{swss}	Stopwatch milliseconds (2 digits)	274
	{swsss}	Stopwatch milliseconds (3 digits)	27
	{swsst}	Stopwatch milliseconds total	1274





# WatchMaker Tags

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selected tag will be ins	Tag	Description	Example
	{swr}	Stopwatch is running?	true
	{swrm}	Stopwatch minute rotation	30
	{swrs}	Stopwatch second rotation	45
	{swrss}	Stopwatch millisecond	47.2
		rotation	
Weather			
	{wl}	Weather Location	London
	{wt}	Current Temperature	13
	{wth}	Today's High	14
	{wtl}	Today's Low	12
	{wtd}	Current Temperature	13°C
		(degrees)	
	{wthd}	Today's High (degrees)	14°C
	{wtld}	Today's Low (degrees)	12°C
	{wm}	Weather Units	С
	{wct}	Current Condition Text	Rain
	{wci}	Current Condition Icon	10d
	{wh}	Current Humidity Number	87
	{whp}	Current Humidity Percentage	87%
	{wp}	Atmospheric Pressure	1003
	{wws}	Wind Speed (mph)	6.2
	{wwd}	Wind Direction (degrees)	140
	{wwdb}	Wind Direction (NE)	NE
	{wwdbb}	Wind Direction (NNE)	NNE
	{wcl}	Cloudiness (%)	0.4
	{wr}	Rain volume for last 3 hrs (mm)	30
	{wsr}	Sunrise time	08:14
	{wss}	Sunset time	17:15
	{wsrp}	Sunrise time (% 24 hours)	0.3
	{wssp}	Sunset time (% 24 hours)	0.7
	{wmp}	Moon Phase (1=young, 5=full, 9=old)	3
	{wml}	Weather manual location	New York
	{wlu}	Weather last update	15:08:27
	{wf0dt}	Forecast Day 0 Temp	11
	{wf0dth}	Forecast Day 0 High	12





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{\begin{array}{c c c c c c c c c c c c c c c c c c c		Tag	Description	Example	
Text   {wf0dci}		{wf0dtl}	Forecast Day 0 Low	5	
{wf0dci}         Forecast Day 0 Condition Icon         10d           {wf1dt}         Forecast Day 1 Temp         11           {wf1dth}         Forecast Day 1 High         12           {wf1dt}         Forecast Day 1 Low         5           {wf1dct}         Forecast Day 1 Condition         Rain           Text         Text         10d           {wf1dci}         Forecast Day 1 Condition         10d           Icon         Weather forecasts are available up to day 5. Fahrenheit can be set in settings.           Calendar           {cex}         Events Exist?         true           {c1t}         Event 1 Exists?         true           {c1b}         Event 1 Exists?         true           {c1b}         Event 1 Begin Rotation (12         20           hours)         4c1e         Event 1 End Rotation (12         240		{wf0dct}	Forecast Day 0 Condition	Rain	
Icon   {wf1dt}   Forecast Day 1 Temp   11   {wf1dth}   Forecast Day 1 High   12   {wf1dtl}   Forecast Day 1 Low   5   {wf1dct}   Forecast Day 1 Low   5   {wf1dct}   Forecast Day 1 Condition   Rain   Text   {wf1dci}   Forecast Day 1 Condition   10d   Icon   Weather forecasts are available up to day 5. Fahrenheit can be set in settings.    Calendar   {cex}   Events Exist?   true   {c1t}   Event 1 Text   Gym   {c1ex}   Event 1 Exists?   true   {c1b}   Event 1 Begin   19:00   {c1br}   Event 1 Begin   19:00   {c1br}   Event 1 Begin   19:00   {c1br}   Event 1 Begin   20:00   {c1e}   Event 1 End   20:00   {c1e}   Event 1 End   20:00   {c1e}   Event 1 End   Rotation (12   240   hours)   {c1e}   Event 1 End   Rotation   Statue of Liberty   {c1c}   Event 1 End   20:00   {c1l}   Event			Text		
Wf1dth		{wf0dci}	Forecast Day 0 Condition	10d	
\begin{array}{c c c c c c c c c c c c c c c c c c c			Icon		
Wef1dct		{wf1dt}	Forecast Day 1 Temp	11	
Wf1dct  Forecast Day 1 Condition Text		{wf1dth}	Forecast Day 1 High	12	
Text		{wf1dtl}	Forecast Day 1 Low	5	
{wf1dci}         Forecast Day 1 Condition Icon         10d           Weather forecasts are available up to day 5. Fahrenheit can be set in settings.           Calendar           {cex}         Events Exist?         true           {c1t}         Event 1 Text         Gym           {c1ex}         Event 1 Exists?         true           {c1b}         Event 1 Begin         19:00           {c1br}         Event 1 Begin Rotation (12         210           hours)         {c1bp}         Event 1 Begin % 24 Hours         0.79           {c1e}         Event 1 End         20:00           {c1er}         Event 1 End Rotation (12         240           hours)         {c1ep}         Event 1 Location         Statue of Liberty           {c1l}         Event 1 Color         ff0000           {c1l}         Event 1 Color         ff0000           {c1i}         Event 1 ID         520          calendars available for up to 10 unfinished events up to a week ahead (configurable in settings)           Sensor           {ssc}         Step Count         1046           {shr}         Heart Rate         72           {sprs}         Barometric Pressure         0		{wf1dct}	Forecast Day 1 Condition	Rain	
Icon   Weather forecasts are available up to day 5. Fahrenheit can be set in settings.			Text		
Veather forecasts are available up to day 5. Fahrenheit can be set in settings.		{wf1dci}	Forecast Day 1 Condition	10d	
Calendar					
{cex}         Events Exist?         true           {c1t}         Event 1 Text         Gym           {c1ex}         Event 1 Exists?         true           {c1b}         Event 1 Begin         19:00           {c1br}         Event 1 Begin Rotation (12 hours)         210           {c1bp}         Event 1 Begin % 24 Hours         0.79           {c1e}         Event 1 End         20:00           {c1er}         Event 1 End Rotation (12 hours)         240           {c1ep}         Event 1 End % 24 Hours         0.83           {c1l}         Event 1 Location         Statue of Liberty           {c1c}         Event 1 Color         ff0000           {c1i}         Event 1 ID         520           calendars available for up to 10 unfinished events up to a week ahead (configurable in settings)           Sensor           {ssc}         Step Count         1046           {shr}         Heart Rate         72           {sprs}         Barometric Pressure         0		Weather forecasts	are available up to day 5. Fah	renheit can be set in <u>se</u>	ttings.
Color   Event 1 Text   Gym   Color   Event 1 Exists?   true   Color   Event 1 Begin   19:00   Color   Event 1 Begin   Rotation (12   210   Hours)   Color   Event 1 Begin % 24 Hours   0.79   Color   Event 1 End   20:00   Color   Color   Event 1 End   Ev	Calendar	1			
{c1ex}       Event 1 Exists?       true         {c1b}       Event 1 Begin       19:00         {c1br}       Event 1 Begin Rotation (12 210 hours)         {c1bp}       Event 1 Begin % 24 Hours       0.79         {c1e}       Event 1 End       20:00         {c1er}       Event 1 End Rotation (12 240 hours)       0.83         {c1l}       Event 1 End % 24 Hours       0.83         {c1l}       Event 1 Location       Statue of Liberty         {c1c}       Event 1 Color       ff0000         {c1i}       Event 1 ID       520         calendars available for up to 10 unfinished events up to a week ahead (configurable in settings)       settings)         Sensor       Step Count       1046         {shr}       Heart Rate       72         {sprs}       Barometric Pressure       0				true	
{c1b}       Event 1 Begin       19:00         {c1br}       Event 1 Begin Rotation (12 hours)       210         {c1bp}       Event 1 Begin % 24 Hours       0.79         {c1e}       Event 1 End       20:00         {c1er}       Event 1 End Rotation (12 hours)       240         {c1ep}       Event 1 End % 24 Hours       0.83         {c1l}       Event 1 Location       Statue of Liberty         {c1c}       Event 1 Color       ff0000         {c1i}       Event 1 ID       520        calendars available for up to 10 unfinished events up to a week ahead (configurable in settings)       settings)         Sensor       Step Count       1046         {shr}       Heart Rate       72         {sprs}       Barometric Pressure       0				Gym	
{c1br}       Event 1 Begin Rotation (12 hours)       210         {c1bp}       Event 1 Begin % 24 Hours       0.79         {c1e}       Event 1 End       20:00         {c1er}       Event 1 End Rotation (12 hours)       240         {c1ep}       Event 1 End % 24 Hours       0.83         {c1l}       Event 1 Location       Statue of Liberty         {c1c}       Event 1 Color       ff0000         {c1i}       Event 1 ID       520         calendars available for up to 10 unfinished events up to a week ahead (configurable in settings)         Sensor         Sensor         Sensor			Event 1 Exists?	true	
hours		{c1b}	_	19:00	
{c1e}		{c1br}		210	
C1er   Event 1 End Rotation (12   240   hours)		{c1bp}	Event 1 Begin % 24 Hours	0.79	
hours		{c1e}	Event 1 End	20:00	
{c1l}   Event 1 Location   Statue of Liberty   {c1c}   Event 1 Color   ff0000   {c1i}   Event 1 ID   520   calendars available for up to 10 unfinished events up to a week ahead (configurable in settings)		{c1er}	-	240	
{c1c}         Event 1 Color         ff0000           {c1i}         Event 1 ID         520          calendars available for up to 10 unfinished events up to a week ahead (configurable in settings)           Sensor           {ssc}         Step Count         1046           {shr}         Heart Rate         72           {sprs}         Barometric Pressure         0		{c1ep}	Event 1 End % 24 Hours	0.83	
Sensor   Step Count   1046   Shr}   Heart Rate   For the specific of the spe		{c1l}	Event 1 Location	Statue of Liberty	
calendars available for up to 10 unfinished events up to a week ahead (configurable in settings)  Sensor  {ssc} Step Count 1046 {shr} Heart Rate 72 {sprs} Barometric Pressure 0		{c1c}	Event 1 Color	ff0000	
Sensor           {ssc}         Step Count         1046           {shr}         Heart Rate         72           {sprs}         Barometric Pressure         0		{c1i}	Event 1 ID	520	
{ssc}         Step Count         1046           {shr}         Heart Rate         72           {sprs}         Barometric Pressure         0			ble for up to 10 unfinished eve	ents up to a week ahead	(configurable in
{ssc}         Step Count         1046           {shr}         Heart Rate         72           {sprs}         Barometric Pressure         0	Sensor				
{sprs} Barometric Pressure 0		{ssc}	Step Count	1046	
		{shr}	Heart Rate	72	
{sax} Accelerometer X 0.5		{sprs}	Barometric Pressure	0	
		{sax}	Accelerometer X	0.5	
{say} Accelerometer Y 0.5		{say}	Accelerometer Y	0.5	





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selected tag will be inse	Tag	Description	Example
	{saz}	Accelerometer Z	0.5
	{sgx}	Gyroscope X	0.5
	{sgy}	Gyroscope Y	0.5
	{sgz}	Gyroscope Z	0.5
	{scr}	Compass for Rotation (needs	-210
		negative)	
	{sct}	Compass Display (0=N, 90=E, 180=S, 270=W)	210
	{sctd}	Compass Display (degrees)	210°
	{scb}	Compass Bearing (NE)	SW
	{scbb}	Compass Bearing (NNE)	SSW
	{sctdb}	Compass Display (degrees + NE bearing)	210° SW
	{sctdbb}	Compass Display (degrees + NNE bearing)	210° SSW
Complication (AWS	3 2.0+)	,	
	{m1text}	Complication 1 Text	e.g. News Text
	{m1title}	Complication 1 Title	e.g. News Title
	{m1value}	Complication 1 Value	e.g. 60, e.g. battery level
	{m1min}	Complication 1 Min	e.g. 0, e.g. battery level
	{m1max}	Complication 1 Max	e.g. 100, e.g. battery level
	{m2text}	Complication 2 Text	e.g. News Text
	{m2title}	Complication 2 Title	e.g. News Title
	{m2value}	Complication 2 Value	e.g. 60, e.g. battery level
	{m2min}	Complication 2 Min	e.g. 0, e.g. battery level
	{m2max}	Complication 2 Max	e.g. 100, e.g. battery level
	{m3text}	Complication 3 Text	e.g. News Text
	{m3title}	Complication 3 Title	e.g. News Title
	{m3value}	Complication 3 Value	e.g. 60, e.g. battery level





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	Tag	Description	Example	
	{m3min}	Complication 3 Min	e.g. 0, e.g. battery level	
	{m3max}	Complication 3 Max	e.g. 100, e.g. battery level	
Tasker				
	{t}	Tasker Plugin Variable	Example Value	